MEETING SUMMARY
WATER RESOURCES ADVISORY COMMISSION (WRAC)
KISSIMMEE BASIN WATER SUPPLY PLAN (KBWSP) UPDATE
REGIONAL WORKSHOP
Okeechobee County School Board
Freshman Campus Auditorium
700 SW 2nd Avenue, Okeechobee, Florida 34973
March 17, 2004 - 9:00 a.m. – 4:00 p.m.

Harkley Thornton – Chairman of Kissimmee Basin Water Supply Plan and SFWMD Governing Board Member was unable to attend.

Attendees:

WRAC Members:

Walter Carson	Harry Cronin
Joe Collins	Patrick Hayes

Interested Parties:

Jeff Adkins	Clell Ford	Kim Lippman
Bill Baxter	Beacham Furse	Tamara McBride
Jennifer Brundy	Dick Galantowicz	Linda McCarthy
Wiener Cadet	Mary Ann Gosa	Gina Ralph
Ken Dodge	Paul Gray	Jack Richie
Bill Dwinell	Albee Huff	George Schlutermann
Chris Ferraro	Steve Lamb	Steve Schubert
		Theresa Woody

Staff:

Ashie Akpoji	Jeff Giddings	Beth Ross
Missie Barletto	Mariano Guardo	Keith Smith
Henry Bittaker	Susan Gray	Rick Smith
Jian Cai	Lewis Hornung	Chris Sweazy
John Mulliken	Lisa Kreiger	Joel Van Arman
Michelle Pearcy	Stephanie Raymond	Cled Weldon
Chris Carlson	Gary Ritter	John Zahina

MORNING SESSION:

1. Welcome and Introductions, John Mulliken, Acting Director, Water Supply Department

The meeting was called to order at 9:10 a.m. Mr. Mulliken reviewed the agenda and explained that there would be a morning and afternoon session. The morning would

session would focus on projects occurring in parallel to the KBWSP efforts. All attendees introduced themselves and named their affiliation.

2. Lake Okeechobee (Lake) Protection Plan, Dr. Susan Gray, Division Director, Lake Okeechobee Division

Dr. Gray presented an overview of the regional multi-purpose water resources related to the Lake Okeechobee protection effort. Information on water supply, navigation, flood protection, fishing, recreation and wildlife habitat was provided. Dr. Gray described three environmental impacts that affect Lake Okeechobee; high phosphorus loading, altered hydrology, and exotic species. Since the 1970s, phosphorus levels have increased greatly.

The Lake Okeechobee Protection Act was passed in 2000. Elements of the bill guide the SFWMD Lake Okeechobee Protection Plan (LOPP). The LOPP is a multi-agency process. Partner agencies were identified as the SFWMD, Florida Department of Environmental Protection (FDEP), and Florida Department of Agricultural and Consumer Services (FDACS). Information on land use in the Lake Okeechobee Watershed was provided.

Funding from the State for FDACS was $15 million in initial appropriations and the Federal amount was $3,806,730. Nonagricultural expenditures and encumbrances from FDEP was $1,000,000. Funding from the State for the SFWMD was $41,000,000 and expenditures have amounted to $35,492,668. An estimated 38% reduction of phosphorus loads to the lakes are projected from implementation of LOPP related projects.

Components of the LOPP were explained to the group. The estimated total phosphorus load reduction in the plan component and the cost distribution was provided. The primary regional vehicle will be through the CERP program. The total estimated cost is $322,200,000. This does not include the cost of the CERP Lake Okeechobee Watershed Project. A spreadsheet showing the proposed future spending was presented. Potential funding from the State and the District will be approximately $5 million a year from each.

The Everglades Construction Project was discussed by a stakeholder and Dr. Gray provided additional information. BMPs in the Istokpoga were also addressed. The Lake Okeechobee Protection Plan will be updated every three years and cost estimates may be revised at that time.

3. Lake Okeechobee Watershed Project, Lewis Hornung, Chief Consulting Engineer, CERP Design & Implementation

Mr. Hornung introduced staff members of the Project Delivery Team. The purpose of the plan is to: improve water quality in Lake Okeechobee; provide for better

management of lake water levels and reduce damaging releases to the estuaries; and, restore hydrology of isolated wetlands.

The purpose of the Regulation Schedule Review Project for Lake Istokpoga (Istokpoga) was to develop an operational plan to address water resource problems. The problems and solutions to improve the Istokpoga were explained. Information on lake water levels from 1937 through 2003 was provided.

The Lake Istokpoga Regulation Schedule Review Project was incorporated into the Lake Okeechobee Watershed Project. This was done to provide the ability to consider structural solutions. The regulation schedule review was limited to only consideration of operational modifications. Since the purposes of both projects are compatible, it is possible that a reservoir or an STA could provide benefits to meet the purposes of both projects.

Among the concerns for Lake Istokpoga are: problems with hydrilla infestation; health of littoral zone; unnatural water level fluctuations; and, water quality and navigational issues. The District is following the USACE six step planning process to improve the Istokpoga.

Information on the formulation plan and the tools that are needed to achieve success with that plan were presented. The land suitability model is GIS-based spatial data model and the constraint layers included in the model were noted. It was used to narrow down the geographic extent of potential sites to be considered.

There are an infinite number of potential combinations of reservoirs and/or STAs that could be constructed on the sites that were identified with the land suitability model. The Lake Okeechobee Watershed Combinatorial Program (LOWCAP) will evaluate all combinations, computes a rough cost estimate for each, and estimates the storage and phosphorus load reduction capabilities. This allows the identification of the most cost effective alternatives in each of the four main basins (Fisheating Creek, Istokpoga, Kissimmee, and Taylor Creek/Nubbin Slough) in the watershed. The next step is to identify the most cost effective set of features across the basins. Three to five of these sets of features, or project alternatives, will be identified for a detailed evaluation.

"Future steps" in the planning process were explained. By October 2005 a final plan should be available. The formal documentation process will occur between 2005-2007. The website for more information is www.evergladesplan.org.

A question and answer session was held. It will take approximately 18 months for the plan to get to the USACE Chief's Report. Regional project deadlines were discussed. The date for completion of all projects is 2013. The Lake Okeechobee Watershed, Lake Istokpoga Regulation Schedule project efforts, and the level of Lake Okeechobee and navigational canals were also discussed. Quantification of ecological lifts was explained by Mr. Hornung and information on performing LOWCAP runs was provided.

4. Lake Istokpoga Minimum Flows and Levels (MFLs) – Status Report, John Zahina, Staff Environmental Scientist, Water Supply Department

Mr. Zahina presented information on MFLs for Lake Istokpoga. He discussed MFLs, resources that need protection, significant harm, and the information collected to date.

Mr. Zahina explained that the Florida Legislature defined MFLs in Florida Statute 373.042(1). The terms "limits of permitable" water and "minimum flows and levels" were explained. Mr. Zahina described three levels in the MFL process. Each level has opportunities for public input. The resource functions and technical relationships of Lake Istokpoga were explained.

The draft document with Minimum Level Criteria is proposed to be available by the fall of 2004. Scientific peer review of the document is expected to be complete in the spring of 2005 at which time the District expects to initiate rulemaking. Final Governing Board approval is proposed for the fall of 2005.

A question and answer session was held. MFLs were defined and the evolving schedule explained. MFLs are set to protect the current resources. A discussion on restoration planning vs protection occurred.

5. Kissimmee Chain of Lakes Long Term Management Plan, Chris Carlson, Sr. Supervising Geographer, Kissimmee Division

Ms. Carlson provided an update on this project and identified the stakeholders. During the last six months there have been partner agency fact-finding meetings. Information from these meetings was used to develop the project charter and goals. Ms. Carlson requested input from all interested parties on the document and is seeking public participation in defining what it means for this lake system to be healthy and sustainable.

Resolution No. 2003-468 was adopted in April 2003 and directs staff to work with the USACE and others to develop a Long-Term Management Plan for the Kissimmee Chain of Lakes. The project purpose is to improve lake ecosystem health; develop management practices to sustain the system; and ensure those management practices consider potential downstream impacts.

The complementary design focused on issues not addressed by other agency programs and is intended to complement other programs. Emphasis is on coordination and integration where appropriate.

The partner agencies were identified. The project objectives are to create a coordinated, multi-disciplinary framework to address and resolve issues. Success depends on the partnership and resource commitment among the agencies and the establishment of scientifically based criteria for management.

The schedule was provided. In September 2006 the final plan should be completed. The development process of the plan was presented.

Goals of the plan are:

- Hydrologic management;
- Habitat preservation and enhancement;
- Aquatic plant management;
- Water quality improvement; and
- Recreation and public use.

Information on what the goals intend to accomplish was provided along with considerations that need to be made relative to downstream ecosystems on the Kissimmee River and Lake Okeechobee.

The document is out for public review and comments are due by April 12, 2004. There will be a WRAC Issues Workshop on this date. Ms. Carlson provided a summary of the public comments received to date.

6. S-67 Structure Replacement on Istokpoga Canal – Status Report, Chris Carlson, Sr. Supervising Geographer, Kissimmee Division

Ms. Carlson presented information on the S-67 proposed design modifications. The USFWS biological opinion expressed concerns with the dredging required to increase conveyance capacity. SFWMD conducted the S-67 environmental benefit analysis and the results of that study showed that the structure capacity requirements could be reduced under different model scenarios and that discharge duration showed potential to increase water supply to the restoration project.

Contract modifications are: to delete canal improvements from S-67 to US 98; reduce capacity of the S-67; modify structure type; modify boat ramp parking; and reduce the bottom width of the Istokpoga Canal east of US 98. Specifications and information on the preliminary schedule were provided.

A question and answer session was held on the structure. A discussion ensued on the existing sediment transfer/transport and what will happen to the sediment in the canal. Ms. Carlson will have District engineers follow up with interested parties to discuss specific concerns.

7. Istokpoga Basin Project Summary, Chris Sweazy, Lead Planner, Water Supply Department

Mr. Sweazy summarized the five presentations heard today and emphasized the multiple District and USACE projects that were ongoing in the Kissimmee Planning area. These projects influence the ongoing water supply planning efforts. Mr. Sweazy also pointed out that the timelines for completion of the projects presented today were

all beyond the 2005 deadline for completion of the current KBWSP planning effort. Development of the KBWSP will be completed with the best available information. As new information becomes available from these related projects it will be incorporated into the plan. The water supply plan has a five-year cycle and is expected to address new information as it becomes available during each plan update.

8. Public Comment

The stakeholders provided comments on: reservoirs; Lake Istokpoga; moratorium on water shortages and the process of rule development on existing capacities; and excess water and where that water will be sent – consumptive use or the Kissimmee River.

[Lunch Break at 11:47 a.m. and reconvene at 1:00 p.m.]

AFTERNOON SESSION.

1. Welcome and Introductions, John Mulliken, Acting Director, Water Supply Department, SFWMD

Mr. Mulliken welcomed everyone to the afternoon session of the meeting. All attendees introduced themselves and stated their affiliation.

2. Action Items from Previous Workshop, Chris Sweazy, Lead Planner, Water Supply Department

Mr. Sweazy presented information on one previous action item and said this mornings information will be posted to the District's web page, located at: www.sfwmd.gov/org/wsd/wsp/kiss/publicworkshop.html.

5. Evaluations of Upper Kissimmee Basin Surface Water Availability, Ashie Akpoji, Sr. Supervising Engineer, Water Supply Department

Mr. Akpoji stated that the purpose of the study was to investigate potential water availability from the Kissimmee Chain of Lakes. The study would also help identify potential environmental considerations and technical issues with the withdrawal of water from the chain of lakes system.

An overview of the presentation was provided and included: a basin description; methodologies used to evaluate water availability; identification of environmental considerations; establishing a preliminary withdrawal schedule; and, drawing conclusions on technical considerations in developing surface water withdrawal projects.

The feasibility study criteria were presented. Discussion of the evaluation techniques employed was also described. Information addressing the environmental concerns in

Lake Toho and East Lake Toho were used as examples, and the downstream environmental needs were reviewed.

A chart showing the typical lake operation schedule based on the present regulation schedule was presented. Withdrawal operation zones and maximum withdrawal rates in the lakes were described for daily diversion conditions. Descriptions of withdrawal reliability were presented for Lake Tohopekaliga and East Lake Tohopekaliga. The available flow reliability was estimated at 60% to 80% for these lakes. Constraints of the withdrawal capability were described as the monthly average flow frequency and continuous flow conditions at the S-65 structure.

The study results are preliminary and will need to tie to the long term management plan for the Kissimmee Basin. The study was based on specific assumptions that did not attempt to find the optimal withdrawal scenario. Further work is recommended.

Mr. Sweazy recapped the reason for this study. Staff members are trying to determine feasibility of lakes diversions and if additional work would be warranted. Also, environmental constraints were identified. The value of this analysis to the long-term management plan was explained by Chris Carlson.

A question and answer session was held.

7. Southern Indian Prairie Basin Operation Plan (SIPBOP or Plan), Henry Bittaker, Sr. Planner, Water supply Department, and Mariano Guardo, Sr. Engineer, Water Supply Department

Mr. Bittaker presented an overview of the Southern Indian Prairie Basin Operation Plan. The planning areas were reviewed on a map. The reasons for addressing the Plan were explained as a recommendation of the Kissimmee Basin Water Supply Plan; water shortages concerns; moratorium on surface water use permits; and estimation of additional supply available from Lake Okeechobee through G-207 and G-208.

The study aspects were to review the existing operation of G-207 and G-208 and other privately controlled structures, to investigate increased use of the G-207 and G-208 pumps and to address any impacts on existing Tribal compact and landowner agreements.

The development efforts included site reconnaissance, meetings with District operation personnel, Seminole Tribe representatives and other landowners.

The Lake Istokpoga regulation schedule was discussed. The preliminary findings were that the G-207 and G-208 pumps have sufficient capacity to meeting existing Southern Indian Prairie demands during a 1-in-10 year drought. It may be possible to increase the use of the pumps by initiating operation earlier. No changes in canal operational levels are recommended.

Operational control findings showed that the District needs more control over the private structures for efficient operation; and corrective actions are needed for private structures regarding flashboard elevations. The District will work with the landowners to get the flashboards set to the correct elevations.

In the L-59 and L-60 canal operations there are limitations on conveyance capacity during declared water shortages, and the L-59 canal blocked at midpoint make deliveries to L-59E difficult.

Rulemaking changes by SFWMD were initiated by Governing Board approval at the March Governing Board meeting where they authorized notice of rule development concerning the BOR moratorium criteria in the Indian Prairie and the Indian Prairie's Regional Water Shortage Plan. Public workshops will be scheduled to discuss potential changes to the rules.

Mr. Guardo presented information on the technical analysis and the steps in the evaluation. A map was shown of the Southern Indian Prairie Basin project area and the major District structures. The water supply operational and the flood control operational routings were shown on a map and thoroughly reviewed for stakeholders.

A water budget model, developed for the SIPBOP, was described. The model, set up to simulate historic conditions, provided a method to evaluate 1-in-10 drought demands. Mr. Guardo explained that the years 1981, 1985, and 1996 were selected as representative of 1-in-10 drought conditions. The evaluation of the modeling was that demands were in the 90^{th} percentile from 36 years of data (1965-2000). In addition, a simulation for 1996-1997 representing greater than 1-in-10 drought was completed. The results of the model suggest that the pumps G-207 and G-208 have capacity to meet existing demands for the southern Indian Prairie Basin defined in the study. The study does not address delivery of water from the pumps to the point of use except to comment on the limited conveyance capacity of the L-canals during drought conditions.

In addition, the capacity of G-207 and G-208 is only capable of supplying the lower basin demands during the modeled 1-in-10 drought if water is available from Lake Okeechobee. The possible withdrawals have not been simulated in the Southeast Sector Model (2X2 model) to assure Lake Okeechobee availability. This modeling is currently underway. Additional modeling linking Northern and Southern Indian Prairie Basins is also currently underway and will be presented at a future meeting.

A question and answer session was held.

Action Item: Historic pumping data for G-207 is available and Chris Sweazy will send the information to the interested party.

Mr. Mulliken responded to a question concerning the supplies to the Tribal community. Although the WSE indicates that water deliveries can be made to 10 feet MSL from Lake Okeechobee, the pumps will work down to capacity to 9.2 feet MSL. Additional

storage is being looked at in the basin, but only private water storage is currently available in this basin.

3. Update on Groundwater Modeling Efforts, Jeff Giddings, Sr. Supervising Hydrogeologist, Water Supply Department

Mr. Giddings presented updated information on the groundwater models, the Kissimmee Basin/East Central Florida Groundwater Flow Model (KBECF) and the Glades Okeechobee Highlands groundwater flow model (GOH). A full presentation was given at the last meeting.

Progress is being made on model calibration. Both the GOH and KBECF models are running (converging) at this time, and the main focus in on calibration. The GOH model is over 50% calibrated and the KBWSP is estimated to be 5% to 10% calibrated.

A question and answer session was held. Discussions ensued on groundwater and surface water in the Loxahatchee Basin and the calibration status of observation wells. The number of observation wells for the Upper Floridan was estimated to be 25 to 30. Surficial wells and the gauges would be at approximately 45-50 sites in the Kissimmee planning area.

4. Preliminary Discussion of Predictive Model Simulations, Chris Sweazy, Lead Planner, Water Supply Department

Mr. Sweazy presented information on the proposed model simulations. Data sets that go into the models often take weeks to develop. This discussion was to see if anyone had suggestions on future simulations. Mr. Sweazy explained that the District identified simulations including the 2025 baseline condition which is the water use from all sources supplied from the proposed unrestricted sources. Other model simulations will look at revised regulation schedules, and 2020, 2015, 2010, 2005 water use. Information on alternative supply simulations was supplied. Possible alternative runs included reuse simulations and new wellfields located in southern Osceola and Polk County. The GOH proposed model simulations were reviewed. This information will be posted on the District's web page in the coming weeks.

6. Draft Documents

- Water & Wastewater Utility Capsules (Distribution)
- Chapter 2 – Demand Estimates (Discussion)
- Demand Appendix (Discussion)
- Water Quality Appendix (Distribution)

Michelle Pearcy, Division Director, Water Supply Planning and Development Department and Chris Sweazy lead the discussion.

A revised set of “Plan Objectives” was distributed by Ms. Pearcy. The objectives were taken word-by-word at the last meeting and the suggested changes have been made. Ms. Pearcy again read all the objectives and asked for comments from stakeholders.

Ms. Pearcy was commended on the changes by a WRAC member. Change was suggested for the “Compatibility with Local Governments” section. No change was made. On the “Linkage with Other Regional Planning Efforts”, a suggested change was made and accepted. The “Natural System Protection” objective had a proposed change to include wording on environmental reservations or environmental supply needs. “Water Conservation” changes were discussed but none were made. Technological and management tools were used to make the Plan Objectives. The discussion included the District’s promise to address these again at a future meeting.

Action Item: Discussion of the plan objectives will be revisited at a future meeting.

Mr. Sweazy provided a handout on Water Quality which was discussed at the January 2004 meeting. Chapter 2 and the demand appendices were distributed at the last meeting and he asked for comments on these documents. Mr. Sweazy also presented a document entitled “Potable Water and Wastewater Facilities Summaries“ and indicated that these were more detailed summaries for utilities. He was to contact the utilities individually to review this document.

8. Public Comment

Joe Collins spoke of new wellfield simulations and asked for further clarification. Mr. Sweazy explained that he was discussing potential wellfields in southern Osceola or Polk County as alternatives to new ground water for central Florida. This is a proposed simulation of a possible alternative source to evaluate its feasibility and may or may not find its way into the water supply plan. Mr. Mulliken added that this is only an option on the water resources of the region in the future.

9. Wrap Up/Action Items.

Mr. Mulliken reviewed the upcoming action items.

10. Next Meeting Date, Location and Agenda

Mr. Mulliken said the April will be re-scheduled. The District will wait until there is additional information to report before scheduling the next meeting. The next WRAC workshop on Kissimmee Basin resource issues is scheduled for April 12, 2004 but will not focus on the Long Term Management Plan for the Kissimmee Chain of Lakes and the Kissimmee Basin Water Supply Plan.

Harkley Thornton had planned to attend today, but sent his regrets. He is detained by 10 inches of snow in Ohio.

Monday, April 12, 2004 10:00 a.m. – 12:00 p.m.	WRAC – WATER SUPPLY PLAN – Issues Workshop Okeechobee County School Board Okeechobee, FL
Cancelled: Tuesday, April 27, 2004 9:00 a.m. – 4:00 p.m.	WRAC – Kissimmee Basin Water Supply Plan Issues Workshop Location: TBD

11. Adjournment at 3:30 p.m.

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Harkley Thornton
Chairman, Kissimmee Basin Water Supply Plan

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Paula Moree
District Deputy Clerk